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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,420	04/05/2005	Andrei Radulescu	NL03 0771 US	6715
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EXAMINER KIM, EDWARD J				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/530,420

Applicant(s)

RADULESCU ET AL.

Examiner

EDWARD J. KIM

Art Unit

2455

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CI/100)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the Request for Continued Examination (RCE) filed on 01/27/2009 and the Amendment filed on 12/29/2008.
2. Claims 1 and 3-8 are pending. Claims 1, 4, 5, and 7 have been amended. Claim 8 has been newly added.

Specification

3. The disclosure is objected to because of the following informalities:
 4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required. The abstract may not include anything other than the abstract on the separate sheet.
5. The abstract of the disclosure is objected to because it does not commence on a separate sheet in accordance with 37 CFR 1.52 (b)(4) and does not meet the requirements of 37 CFR 1.72(b). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. See MPEP § 608.01(b).
6. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.

- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

It is noted by the Examiner that the Applicant has failed to disclose what the prior art is, what problem and how the invention is trying to solve (for example, no distinction between Background of the Invention and Detailed Description of the Invention).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1, 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. Claims 1 and 7 recite, "...wherein each of the first and second subset ranges of addresses is greater than one address, wherein a first one of the second electronic modules is...", wherein the claim language is unclear to what is meant by the subset ranges of addresses being "greater

than one address". One interpretation will be, for example, number 5 is *greater than* number 1. Along the same context, the claim language reads, the subset ranges of addresses is *greater than* one address (wherein the term "greater" is defined in numeric terms and "one address" refers to a predefined address). Another interpretation will be when the subset range of addresses comprise *of more than one* address, a plurality of addresses. At least for these reasons, the Applicant has failed to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The metes and bounds of the claim limitation cannot be determined.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Davis et al. (US Patent #5,754,764), hereinafter referred to as Davis, in view of Sahasrabuddhe et al. ("Multicast routing algorithms and protocols: a tutorial", Network, IEEE, Jan/Feb 2000 vol.14 Issue 1, ISSN 0890-8044), hereinafter referred to as Sahasrabuddhe.

Regarding claim 1, Davis discloses, an integrated circuit comprising a network and a plurality of electronic modules, said electronic modules being arranged to communicate to each other via the network (Davis, Abstract, col.1 ln.58-61), wherein the network is arranged to establish transactions between a first electronic module and at least two second electronic modules (Davis, col.3 ln.22-45, col.15 ln.19-60, col.27 ln.38-40, col.51 ln.22-42), characterized

in that the network comprises means for replicating a single request from the first module into at least two replicated requests, and for sending the replicated requests to the second electronic modules (Davis, col.27 ln.38-40, col.51 ln.22-42. It is inherent in multicasting that the message to be multicast are replicated accordingly.), wherein said means for replicating comprises an address space and a facility for mapping at least one multicast address onto at least two further addresses in a range of addresses (Davis, col. 27 ln.38-40, col.51 ln.22-42, col.63 ln.27-46. Davis discloses an address translation table for mapping purposes.).

However, Davis fails to explicitly disclose, wherein the range of addresses comprises a first subset range of addresses and a second subset range of addresses, wherein each of the first and second subset ranges of addresses is greater than one address, wherein a first one of the second electronic modules is associated with the first subset range of addresses such that any request sent to any of the first subset range of address is sent to the first one of the second electronic modules and a second one of the second electronic modules is associated with the second subset range of addresses such that any request sent to any of the second subset range of address is sent to the second one of the second electronic modules. Sahasrabudde discloses, In the art of computer networks, multicast routing may be carried out in various ways. The two most basic methods is as follows: (1) via unicasting n point-to-point connections, where the sender/source replicates n number of messages/data/requests (2) via a single multicast connection that is then distributed to more than one multicast destinations by a module other than the sender/source (Sahasrabudde, fig.1, fig.2, fig.3, fig.4 left column pg.90, right column pg.91, left column pg.92). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Davis with those of Sahasrabudde. One would

have been motivated to do so, since Davis discloses multicasting and Sahasrabudde discloses a tutorial of utilizing multicasting.

Regarding claim 3, Davis disclosed the limitations, as described in claim 1, and further discloses, an integrated circuit, wherein the means for replicating further comprises a facility for mapping at least one first multicast address onto at least one second multicast address, provided that the second multicast address is not mapped onto the first multicast address (Davis, col. 27 ln.38-40, col.51 ln.22-42, col.63 ln.27-46.).

Regarding claim 4, Davis disclosed the limitations, as described in claim 1, and further discloses, an integrated circuit, wherein the means for replicating further comprises a facility for mapping a range of multicast addresses onto at least the first and second subset ranges of addresses (Davis, col. 27 ln.38-40, col.51 ln.22-42, col.63 ln.27-46.).

Regarding claim 5, Davis disclosed the limitations, as described in claim 1, and further discloses, an integrated circuit, wherein the single request comprises a connection identifier for identifying a multicast connection, wherein the multicast connection includes at least one of guaranteed throughput, latency and jitter, ordered delivery, and flow control (Davis, col. 27 ln.38-40, col.51 ln.22-42, col.63 ln.27-46. Davis discloses that the multicast connection is identified via hashing.).

Regarding claim 6, Davis disclosed the limitations, as described in claim 1, and further discloses, an integrated circuit, wherein said means for replicating comprises a network interface circuit for performing the replication of the single request into the replicated requests, and wherein the network interface circuit sends the replicated requests to the second modules (Davis, col. 27 ln.38-40, col.51 ln.22-42, col.63 ln.27-46.).

Regarding claim 7, Davis discloses, a method for sending requests in an integrated circuit comprising a network and a plurality of electronic modules, which communicate to each other via the network (Davis, Abstract, col.1 ln.58-61), wherein the network establishes transactions between a first electronic module and at least two second electronic modules (Davis, col.3 ln.22-45, col.15 ln.19-60, col.27 ln.38-40, col.51 ln.22-42), characterized in that the method comprises the network replicating a single request from the first module into at least two replicated requests, and the network sending the replicated requests to the second electronic modules (Davis, col.27 ln.38-40, col.51 ln.22-42. It is inherent in multicasting that the message to be multicast are replicated accordingly.), wherein said means for replicating comprises an address space and a facility for mapping at least one multicast address onto at least two further addresses in a range of addresses (Davis, col. 27 ln.38-40, col.51 ln.22-42, col.63 ln.27-46. Davis discloses an address translation table for mapping purposes.).

However, Davis fails to explicitly disclose, wherein the range of addresses comprises a first subset range of addresses and a second subset range of addresses, wherein each of the first and second subset ranges of addresses is greater than one address, wherein a first one of the second electronic modules is associated with the first subset range of addresses such that any request sent to any of the first subset range of address is sent to the first one of the second electronic modules and a second one of the second electronic modules is associated with the second subset range of addresses such that any request sent to any of the second subset range of address is sent to the second one of the second electronic modules. Sahasrabuddhe discloses, In the art of computer networks, multicast routing may be carried out in various ways. The two most basic methods is as follows: (1) via unicasting n point-to-point connections, where the

sender/source replicates *n* number of messages/data/requests (2) via a single multicast connection that is then distributed to more than one multicast destinations by a module other than the sender/source (Sahasrabuddhe, fig.1, fig.2, fig.3, fig.4 left column pg.90, right column pg.91, left column pg.92). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Davis with those of Sahasrabuddhe. One would have been motivated to do so, since Davis discloses multicasting and Sahasrabuddhe discloses a tutorial of utilizing multicasting.

Regarding claim 8, Davis disclosed the limitations, as described in claim 1, and further discloses, wherein the means for replicating further comprises a facility for mapping at least one first multicast address onto two or more addresses associated with a single one of the second electronic modules (Sahasrabuddhe, fig.1, fig.2, fig.3, fig.4 left column pg.90, right column pg.91, left column pg.92).

Response to Arguments

12. Applicant's arguments filed 12/29/2008 have been fully considered but they are not persuasive.
13. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.
14. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of

the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

15. The claim language seems to be generic that conventional multicasting system and methods still read on the claim language.

16. For additional reference, the Examiner provides a copy of the section “8.7 Multicast Routing” of “Communication Networks: Fundamental Concepts and Key Architectures” by Leon-Garcia et al., which is used for a college course in Computer Networks 101.

Conclusion

17. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied up on is considered pertinent to applicant's disclosure.

- Refer to form PTO-892

A Shortened statutory period for reply is set to expire 3 month(s) or thirty (30) days, whichever is longer, from the mailing date of this communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward J. Kim whose telephone number is (571) 270-3228. The examiner can normally be reached on Monday - Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward J Kim/
Examiner, Art Unit 2455

/saleh najjar/
Supervisory Patent Examiner, Art Unit 2455